REMARKS

Claim 1 is amended to clarify that the claim is drawn to a method for operating an intake air control valve for an internal combustion engine, as originally recited in claim 2, now cancelled. Claims 1, 7 and 8 are amended to clarify that the recited range of motion is defined by first and second limits, that the internal combustion engine has an ignition on state and an ignition off state, and that the actuating steps are carried out in the ignition off state, as described at page 4, lines 10-23.

Claim Rejection under 35 USC § 112

Claims 1-8 were rejected under35 USC § 112 as indefinite in reciting "extremes." Applicants used the term "extreme" in accordance with its ordinary meaning of "either of two things situated at opposite ends of a range," see The American Heritage Dictionary of the English Language, fourth edition. For purposes of clarity, the claims have been amended to more particularly point out that the range of motion is between first and second limits. Therefore, it is requested that the rejection be withdrawn.

Claim Rejection under 35 USC § 103

Claims 1-8 were rejected under 35 U.S.C. § 103 as unpatentable over United States Patent Application Publication No. US 2005/0072403, by Miyazaki et al.

Miyazaki et al. describes a throttle device for an internal combustion engine that

includes a valve 15 and a motor 30, see Fig. 1. A shielding portion 55 prevents foreign compounds from entering the motor and interfering with the contact between the brush 45 and the commutator 44 of the motor, see paragraphs 0039 and 0040. Whereas Miyazaki et al. blocks foreign contaminants, Applicants invention is concerned with removing oxidation contaminants that build-up on the brush and the commutator as the result of normal operation, see page 2, lines 1-4. For this purpose, Applicants actuate the motor to drive the motor over its range of motion. Moreover, in Applicants' invention, the motor is actuated to remove the contaminants when the engine is off. Nothing in Miyazaki et al. describes actuating the motor when the engine is off to remove contaminants from the commutator or brush. Without this, Miyazaki et al. cannot teach or suggest Applicants' invention.

Claim 1 is directed Applicants' method for removing contamination from commutators and brushes of a DC motor connected to an intake air control valve of an internal combustion engine. Miyazaki et al. is concerned with blocking foreign contaminants, and does not address the problem of removing contaminants once formed. Claim 1 calls for actuating the motor in opposite directions to drive the intake control valve to the limits. Further, as recited in claim 1, the motor is actuated when the internal combustion engine is in the ignition off state. Miyazaki et al. does not describe driving the motor between its limits when the engine is off to remove contaminants. Therefore, Miyazaki et al. does not teach or suggest Applicants' method in claim 1.

Claims 3-6 are dependent upon claim 1 and so not shown by Miyazaki et al. at

least for the reasons set forth with regard to that claim.

Claim 7 is directed to Applicants' improvement in an intake air control system of an internal combustion engine that includes a DC motor and a programmable controller. The improvement includes programming the controller to actuate the motor to drive the valve over its predetermined range of motion when the engine is in the off ignition state. As discussed above with respect to claim 1, Miyazaki et al. does not describe actuating the motor to drive the valve when the engine is off in order to remove contaminants. Thus, Miyazaki et al. does not teach or suggest Applicants' invention in claim 7.

Claim 8 is directed to an internal combustion engine that includes a programmable controller that is programmed to actuate the motor to drive the intake air valve between the limits of its range of motion when the engine is in the ignition off state. As discussed above, Miyazaki et al. does not describe this operation and so cannot teach or suggest Applicants' invention as set forth in claim 8.

Accordingly, it is respectfully requested that the rejection of the claims based upon Miyazaki et al. be reconsidered and withdrawn, and that the claims be allowed.

Conclusion

It is believed, in view of the amendments and remarks herein, that all grounds of rejection of the claims have been addressed and overcome, and that all claims are in condition for allowance. If it would further prosecution of the application, the Examiner is urged to contact the undersigned at the phone number provided.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 50-0831.

Respectfully submitted,

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